

ABI QUESTIONS AND RESPONSES

CONTAMINATION

1. Please elaborate on the contamination requirements for the ABI. For example, types of contaminants, amount of contamination, source of contaminants (such as propulsion units), purging requirements, etc.
2. Will there be a contamination cover to protect ABI optics prior to launch (removed prior to launch)?

Response: Contamination Control Plan and requirements are in process. A preliminary version of the Contamination Control Plan is expected ~November 2005.

OPTICS

1. Will ABI comply with GIRD842 (3.1.2.3-3) and GIRD45 (3.1.2.3-4)?

Response: Yes, ABI is intending to meet GIRD842 and GIRD45

2. Will an aperture cover be used to protect the instrument's optics? Can this cover be operated repeatedly (opened, closed) during on-orbit operations?

Response: The aperture cover can be operated repeatedly on orbit. Further requirements analysis will define for which conditions the cover will be closed.

THERMAL CONTROL

1. Please describe the thermal control features for ABI. Are radiators active or passive?

Response: ABI will use an active cooler for the focal planes, and passive coolers for thermal control of the Sensor Module, including the active coolers themselves.

2. Are there any solar view requirements on specific instrument surfaces?

Response: There are currently no additional Solar constraints (Keep-out zones) beyond those defined in the GIRD. ABI will require view of the sun through its -X face clear FOV provided by ABIUIID96 (3.3.6-1).

3. Will ABI comply with GIRD46 (3.1.2.3-5) i.e, any expected UIID clarification?

Response: ABI is expected to comply with GIRD46

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HARDWARE INTERFACE

1. Will the ABI be provided as a single unit or as multiple components, each with its own mounting requirements?

Response: ABI consists of a Sensor Unit and an Electronics Unit.

3. What is the proposed method and interface properties for ABI components to be mounted to the spacecraft (e.g. number and location of mounting points, thermal characteristics, shock/vibe, etc.) ?

Response: The Sensor Unit will mount to the spacecraft with 3 kinematic mounts. The Electronics Unit will direct mount to the spacecraft and be thermally coupled. Additional details will be available in the Instrument Description Document. Preliminary version will be released ~November 2005.

4. Please describe proposed connectors between ABI and spacecraft, including location, purpose, etc.

Response: Details are to be defined in the IDD.

LAYOUT

1. Can a preliminary layout of ABI hardware be provided that shows basic components such as sensors, electronics, auxiliary electronics, heat pipes, ABI interconnect cables (if multiple components), location of electrical connectors to spacecraft harness, etc.? Please include location and size of ABI optical port.

Response: Details to be defined in the IDD

DATA INTERFACE

1. Please describe any data needed by ABI from the spacecraft. For example, expected synchronization or timing data, calibrated or un-calibrated gyro data of a particular accuracy, navigated position, attitude updates, the amount of data and frequency of data updates, etc.

Response: ABI currently needs only the ancillary packet defined in the GIRD (S/C attitude, S/C attitude rate, S/C position, S/C velocity).

POINTING

1. What are ABI assumptions about spacecraft pointing and angular rate errors?

Response: Assumptions are based on the interface requirements defined in the GIRD.